REMARKS

Initially, in the Office Action dated March 26, 2004, the Examiner has objected to the Declaration as lacking an application number and filing date. Claims 1-9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,587,815 (Rubin et al.) in view of U.S. Patent Publication No. 2002/0143521 (Call). Claims 10-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Rubin et al. in view of U.S. Patent Publication No. 2002/0143521 (Van Ee).

By the present response, Applicant has amended claim 1 to further clarify the invention. Claims 1-19 remain pending in the present application.

Oath/Declaration

The Examiner indicates that the Oath or Declaration is defective and not in compliance with 37 C.F.R. §1.67(a) because it does not identify the citizenship of each inventor. Applicants are submitting concurrently with this response a signed Declaration with all appropriate information.

35 U.S.C. §103 Rejections

Claims 1-9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Rubin et al. in view of Call. Applicants respectfully traverse these rejections.

Rubin et al. discloses a technique for improving the performance of binary tree operations that involves defining an implicit binary tree structure in a memory array, and clustering of the nodes in a tree in memory in a cache-aware manner.

The technique reduces memory latency by improved spatial locality of the binary tree data and further improves cache performance through reduced size of the data objects resulting from elimination of pointers to other nodes of the tree.

Call discloses apparatus for storing and processing a plurality of data items each comprising supply data values organized in one or more fields each of which stores typed data. Character strings and natural language text are converted to numerical token values in an array of fixed length integers and other forms of typed data (real numbers, dates, times, Boolean values, etc.) are also converted to integer form and stored in the array. Stored metadata specifies the data type of all data in the integer array to enable each integer to be rapidly accessed and interpreted. Data stored in the integer array is subdivided into items, and items are subdivided into fields. Items may be organized into more complex data structures, such as relational tables, hierarchical object structures, linked lists and trees, and the like, using special fields called links which identify other referenced items.

Regarding claim 1, Applicant submits that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of this claim of, inter alia, representing a document written in a markup language and stored in a mobile terminal that includes providing a virtual node tree describing the structure of the data types in the document, each of the nodes in the virtual node tree respectively corresponding to one element of a specific data type in the document, for each one of the nodes in the virtual node tree, providing a data array including information identifying the relationship of the node to

other nodes in the virtual node tree and a reference indicating the location of the data corresponding to the node, or obtaining, by a set of software components in the mobile terminal, the data corresponding to the nodes using the reference included in the data array. Rubin et al. merely relates to clustering and compaction of binary trees. Further, Call merely relates to storing and manipulating variable length and fixed length data elements as a sequence of fixed length integers. Neither Rubin et al. nor Call disclose or suggest anything related to a mobile terminal. Further, none of the cited references disclose or suggest representing a document written in a markup language and stored in a mobile terminal, as recited in the claims of the present application.

Moreover, none of the cited references disclose or suggest providing a virtual node tree describing the structure of the data types in the document, as recited in the claims of the present application. Rubin et al. is simply directed to efficient storage of recursive data structures in a computer memory (see col. 1, lines 8-13) and Call directed to storing and transmitting both variable length data and fixed length data and performing processing operations on such data (see page 1, paragraph 4). Both Rubin et al. and Call are directed to storing of information. None of the cited references disclose or suggest or anything related to a document or describing the structure of data types in a document using a virtual node tree, as recited in the claims of the present application.

Moreover, none of the cited references disclose or suggest obtaining, by a set of software components in the mobile terminal, the data corresponding to the nodes

using the reference included in the data array. As noted previously, none of the cited references disclose or suggest anything related to a mobile terminal. Further, none of the cited references disclose or suggest a set of software components in a mobile terminal that obtain data corresponding to nodes using a reference included in a data array.

The Examiner asserts that Rubin et al. discloses these limitations in the claims of the present application in Figs. 3, 5 and 6 and col. 2, lines 42-62 and col. 3, lines 8-24. However, these portions of Rubin et al. merely disclose the tree structure in memory of Rubin et al. that includes a parent node with a predetermined number of child nodes where the parent node of the tree is associated with a first index of an indexed array of data elements and each child node of the parent node is associated with second indices of the array, and the method of arranging a binary tree structure in memory including these elements. As noted previously, these portions of Rubin et al. merely disclose the technique for improving the performance of a binary tree stored in a memory. These portions of Rubin et al. do not disclose or suggest anything related to a document, describing the structure of data types in a document in a virtual node tree, or software components in a mobile terminal that obtain data corresponding to the nodes, as recited in the claims of the present application.

The Examiner admits that Rubin et al. does not disclose or suggest a document structure written in a markup language wherein the data arrays have a fixed or variable length, but asserts that Call discloses these limitations on page 2, paragraphs 16 and 17. However, although the terms "fixed and variable length data"

are disclosed in these paragraphs, the disclosure in Call has nothing to do with a document, or representing a document written in a markup language stored in a mobile terminal, as recited in the claims of the present application.

Regarding claims 2-9, Applicant submits that these claims are dependent on independent claim 1 and, therefore, are patentable at least for the same reasons noted regarding this independent claim. For example, Applicant submits that none of the cited references disclose or suggest where the data in the document is stored in a document block in memory, or where the data arrays further include a flags field.

Accordingly, Applicant submits that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 1-9 of the present application. Applicant respectfully requests that these rejections be withdrawn and that these claims be allowed.

Claims 10-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Rubin et al. in view of Call and further in view of Van Ee. Applicant respectfully traverses these rejections.

Van Ee discloses a mobile phone that has a display with a touch screen. The device has a browser and is capable of retrieving a web page from the Internet. The page is first displayed in its entirety. The user can recognize the page's general layout and presence of hyperlinks. When the user touches a particular location on the touch screen that corresponds to a portion of the page's image, the portion gets

displayed so as to fill the display's area. Thus, the user can browse the web with a display of limited size.

Regarding claim 10, Applicant submits that none of the cited references disclose or suggest the limitations in the combination of this claim of, inter alia, a mobile phone that includes a set of software components, where at least one of the set of software components carries out a method of representing a document written in a markup language and rendering the document on the display, where the method includes providing a virtual node tree describing the structure of the data types in the document, each one of the nodes in the virtual node tree respectively corresponding to one element of a specific data type in the document, for each one of the nodes in the virtual node tree, providing a data array including information identifying the relationship of the node to other nodes in the virtual node tree and a reference to the location of the data corresponding to the node, and obtaining the data corresponding to the nodes using the references included in the data array. As noted previously, neither Rubin et al. nor Call disclose or suggest anything related to a mobile phone, a document, software components in a mobile phone, or describing the structure of data types in a document using a virtual node tree. Van Ee merely discloses a mobile phone with an auto zoom for graphical display of a web page. Van Ee does not disclose or suggest anything related to documents, representing a document written in a markup language, or a virtual node tree describing the structure of the data types in the document, as recited in the claims of the present application. Applicants submit that Van Ee does not overcome the substantial defects noted

previously regarding Rubin et al. and Call. Van Ee is merely a mobile phone and contains none of the limitations in the claims of the present application except being a mobile phone.

Moreover, Applicants submit that one of ordinary skill in the art would have no motivation to combine Rubin et al., Call and Van Ee in an attempt to achieve the limitations in the claims of the present application. There is no teaching or suggestion that provides motivation to integrate the compact tree representation disclosed in Rubin et al. and Call with a mobile phone as disclosed in Van Ee. Moreover, as has been noted, none of the cited references disclose or suggest anything related to documents written in a markup language or describing data structures of data types in the document and, therefore, the combination of the cited references still fails to achieve the limitations in the claims of the present application.

Regarding claims 11-19, Applicant submits that these claims are dependent on independent claim 10 and, therefore, are patentable at least for the same reasons noted regarding this independent claim. For example, Applicant submits that none of the cited references disclose or suggest where the data in the document is stored in a document block in memory or where the data arrays further includes a flags field, or where a flag in the flags field indicates whether or not the node is a last sibling in a list of siblings.

Accordingly, Applicant submits that none of the cited references, taken alone or in any proper combination, disclose, suggest or render obvious the limitations in the combination of each of claims 10-19 of the present application. Applicant

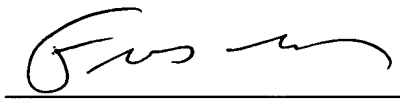
respectfully requests that these rejections be withdrawn and that these claims be allowed.

In view of the foregoing amendments and remarks, Applicant submits that claims 1-19 are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (referencing attorney docket no. 730.39161X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



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